

**INITIAL EXPRESS TERMS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DIVISION OF THE STATE ARCHITECT – STRUCTURAL SAFETY (DSA-SS)
REGARDING THE CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGreen)
CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 11**

LEGEND FOR EXPRESS TERMS

1. Existing California amendments appear upright.
2. Amended or new California amendments appear underlined.
3. Repealed California language appears upright and in strikeout.

INITIAL EXPRESS TERMS

The Division of the State Architect (DSA) proposes to amend the 2016 edition of the California Green Building Standards Code (CGBSC) for the 2018 Triennial Code Cycle. Amended text is as follows:

ITEM NUMBERS LISTED BELOW:

ITEM 1. DSA proposes to amend Chapter 1, Section 105.1.

**CHAPTER 1
ADMINISTRATION**

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**SECTION 105
DIVISION OF THE STATE ARCHITECT**

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105.1.1 Application - Public elementary and secondary schools and community colleges. New building construction and related site work on a new ~~or existing site, and~~ construction and related site work on an existing site including new buildings, additions to existing buildings, additions to site facilities, and landscape work per the scoping requirements of Section 301.4.

Note: The Application of Standards outlined in Title 24, Part 6 supersedes the above application as it applies to the California Energy Code.

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ITEM 2. DSA proposes to amend Chapter 2, Definitions.

CHAPTER 2 DEFINITIONS

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**SECTION 202
DEFINITIONS**

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CONSTRUCTION SITE. A parcel of land bounded by lot line(s) or a designated portion of a public right-of-way where construction is taking place. A construction site may include, but not be limited to, buildings and accessory structures, walks, sidewalks, curbs, curb ramps, parking facilities, planting areas, pools, promenades, exterior gathering or assembly areas, raised or depressed paved areas, open spaces, golf courses, and/or landscape areas.

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DEWATERING: Pumping of uncontaminated or treated groundwater for construction activities.

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DISINFECTED TERTIARY RECYCLED WATER. Filtered and subsequently disinfected wastewater that meets the approved method of treatment and minimum level of water quality specified in California Code of Regulations, Title 22, Division 4, Chapter 3 for the purpose of direct beneficial use.

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HYBRID URINAL. A urinal that conveys waste into the drainage system without the use of water for flushing and automatically performs a drain-cleansing action after a predetermined amount of time.

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NON-STORMWATER DISCHARGES: Discharges that do not originate from precipitation events. Including, but not limited to, dewatering activities, washout area discharge, vehicle and equipment cleaning, street cleaning, and irrigation runoff.

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RECLAIMED (RECYCLED) WATER. **[DSA-SS]** Nonpotable water that meets California Department of Public Health State Water Resources Control Board statewide uniform criteria for disinfected tertiary recycled water. Reclaimed (recycled) water is also known as “recycled water”

or “reclaimed water”.

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RECYCLED WATER SUPPLY SYSTEM. The building supply pipe, the water distribution pipes, and the necessary connecting pipes, fittings, control valves, backflow prevention devices, and all appurtenances carrying or supplying reclaimed (recycled) water in or adjacent to the building or within the premises.

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URINAL, HYBRID. A urinal that conveys waste into the drainage system without the use of water for flushing and automatically performs a drain-cleansing action after a predetermined amount of time.

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ITEM 3. DSA proposes to amend Chapter 3, Section 301.4 as it relates to the scoping requirements for public schools and community colleges.

CHAPTER 3 GREEN BUILDING

SECTION 301 GENERAL

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301.4 Mandatory measures for Public public schools and community colleges. [DSA-SS]
~~Newly constructed buildings on new or existing sites shall comply with Chapter 5. Additions to existing buildings, newly constructed landscape work, and rehabilitated landscape work shall comply with Chapter 5, Section 5.301.6, Outdoor Water Use.~~ New building construction and related site work on a new or existing site shall comply with Section 301.4.

301.4.1 Building and site construction on a new site shall comply with Chapter 5.

301.4.2 Work on an existing site shall comply with Section 301.4.2.1 or 301.4.2.2.

301.4.2.1 Construction of a new building and related site work, including new surface parking area serving the new building, shall comply with Chapter 5. Construction of a new building greater than 1,600 square feet shall also comply with Section 301.4.2.3.

301.4.2.2 Construction of an addition to an existing building greater than 1,600 square feet shall comply with Section 301.4.2.3.

301.4.1.2.3 Minimum rehabilitated landscape area requirement for existing sites.
[DSA-SS] A minimum rehabilitated landscape area equal to 75 percent of the footprint area of the new building or of an addition to an existing building shall be provided and comply with Section 5.304.6 and Section 5.107.

Exceptions:

1. The new building or addition to an existing building is less than 1,600 square feet in floor area.
2. The entire existing site's irrigated landscape areas are in full compliance with Section 5.304.6.
3. The new building or addition to an existing building is to be partially or entirely constructed on an existing irrigated landscape or turf lawn area which is not in compliance with the current MWELo requirements and is equal to or greater than the minimum rehabilitated landscape area requirement of Section 301.4.1.

301.4.3 Newly constructed and rehabilitated landscape areas shall comply with Sections 5.304.6 and 5.107.

301.4.4 Compliance forms, worksheets and reference material for construction of new buildings. Refer to Chapter 8 for applicable mandatory measures' reference material.

301.4.5 Voluntary measures for public schools and community colleges. [DSA-SS]
Appendix A5, Nonresidential Voluntary Measures, outlines a means of achieving the enhanced design and construction of facilities by incorporating additional measures that exceed the mandatory code. These measures encourage sustainable design and construction practices which minimize the impact on the environment and create high-performance buildings that improve public health, safety and general welfare.

*Note: The building commissioning standard outlined in the California Energy Code is a mandatory measure; refer to Chapter 8 for resource information. The measures outlined in the California Green Building Standards, Chapter 5, Section 5.410.2 for Commissioning and Section 5.410.4 for Testing and Adjusting are **not** adopted as mandatory measures by DSA and are voluntary measures. These optional standards which exceed the California Energy Code's commissioning requirements are verification practices that are encouraged and recommended to ensure performance, comfort, system durability, reliability, indoor air quality, and efficiency.*

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ITEM 4. DSA proposes to repeal Chapter 3, Section 306 in its entirety and move this language to Section 301.4.

**SECTION 306 (DSA-SS)
VOLUNTARY MEASURES**

306.1 Purpose. For public schools and community colleges, Appendix A5, Nonresidential Voluntary Measures, is provided as a guideline to further encourage building practices that improve public health, safety and general welfare by promoting the use of building concepts which minimize the building's impact on the environment, promote a more sustainable design and high-performance educational facilities.

306.1.1 The optional provisions of Appendix A5, Divisions A5.1 through A5.5, outline means of achieving enhanced construction levels by incorporating additional measures that exceed the mandatory code.

306.1.2 The measures outlined in Chapter 5, Section 5.410.2 for Commissioning and Section 5.410.4 for Testing and Adjusting are not adopted as mandatory standards by the DSA; however, are referenced here as optional verification practices that are encouraged and recommended to ensure performance, comfort, system durability, reliability, indoor air quality, and efficiency.

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ITEM 5. DSA proposes to co-adopt Chapter 5, Division 5.1, Section 5.106.5.3 for Electrical Vehicle (EV) charging, including amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle regarding the deletion of the Notes to Section 5.106.5.3.5.

CHAPTER 5 NONRESIDENTIAL MANDATORY MEASURES

Division 5.1 – PLANNING AND DESIGN

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SECTION 5.106 SITE DEVELOPMENT

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5.106.5.3 Electric vehicle (EV) charging. [N] Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

5.106.5.3.1 Single charging space requirements. [N] When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.

2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1".
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-ampere dedicated branch circuit for the future installation of the EVSE.

5.106.5.3.2 Multiple charging space requirements. [N] When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
3. Plan design shall be based upon 40-ampere minimum branch circuits.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.
5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

TABLE 5.106.5.3.3

<u>TOTAL NUMBER OF ACTUAL PARKING SPACES</u>	<u>NUMBER OF REQUIRED EV CHARGING SPACES</u>
<u>0-9</u>	<u>0</u>
<u>10-25</u>	<u>1</u>
<u>26-50</u>	<u>2</u>
<u>51-75</u>	<u>4</u>
<u>76-100</u>	<u>5</u>
<u>101-150</u>	<u>7</u>
<u>151-200</u>	<u>10</u>
<u>201 and over</u>	<u>6 percent of total ¹</u>

1. Calculation for spaces shall be rounded up to the nearest whole number.

5.106.5.3.4 [N] Identification. The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”

5.106.5.3.5 [N] Future charging spaces. Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

Notes:

- ~~1. The California Department of Transportation adopts and publishes the California Manual on Uniform Traffic Control Devices (California MUTCD) to provide uniform standards and specifications for all official traffic control devices in California. Zero Emission Vehicle Signs and Pavement Markings can be found in the New Policies & Directives number 13-01. www.dot.ca.gov/hq/traffops/policy/13-01.pdf.~~
- ~~2. See Vehicle Code Section 22511 for EV charging spaces signage in off-street parking facilities and for use of EV charging spaces.~~
- ~~3. The Governor’s Office of Planning and Research published a Zero-Emission Vehicle Community Readiness Guidebook which provides helpful information for local governments, residents and businesses. www.opr.ca.gov/docs/ZEV_Guidebook.pdf.~~

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ITEM 6. DSA proposes to co-adopt the revisions made by the CBSC during the 2016 Intervening Code Cycle for Chapter 5, Division 5.1, Section 5.106.8, Light Pollution.

5.106.8 Light pollution reduction. [N] Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the *California Energy Code* for Lighting Zones ~~04~~–4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code*; and
2. Backlight, ~~Uplight and Glare~~ (BUG) ratings as defined in IES TM-15-11(shown in TABLE A-1 in chapter 8);
3. Uplight and Glare ratings as defined in *California Energy Code* (shown in TABLES 130.2-A and 130.2B in chapter 8) and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8 [N], or

Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify...
2. Emergency...
3. Building façade meeting the requirements...
4. Custom lighting features as allowed by the local enforcing...

Notes:

1. [N] See also *California Building Code*, Chapter 12, Section 1205.6 7 for college campus lighting requirements for parking facilities and walkways.
2. Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, *California Energy Code* Tables 130.2-A and 130.2-B.

TABLE 5.106.8.1 [N]
MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS^{1,2}

ALLOWABLE RATING	<u>LIGHTING</u> <u>G ZONE</u> <u>LZ0</u>	<u>LIGHTING</u> <u>ZONE</u> <u>LZ1</u>	<u>LIGHTING</u> <u>ZONE</u> <u>LZ2</u>	<u>LIGHTING</u> <u>G ZONE</u> <u>LZ3</u>	<u>LIGHTING</u> <u>ZONE</u> <u>LZ4</u>
Maximum Allowable Backlight Rating³ (B)					
Luminaire greater than 2 mounting heights (MH) from property line	<u>N/A</u>	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1 – 2 MH from property line	<u>N/A</u>	B2	B3	B4	B4
Luminaire back hemisphere is 0.5 – 1 MH from property line	<u>N/A</u>	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	<u>N/A</u>	B0	B0	B1	B2
Maximum Allowable Uplight Rating (U)					
For area lighting ⁴	<u>N/A</u>	U0	U0	U0	U0

For all other outdoor lighting, including decorative luminaires	<u>N/A</u>	U1	U2	U3	U4
Maximum Allowable Glare Rating⁵ (G)					
Luminaire greater than 2 MH from property line	<u>N/A</u>	G1	G2	G3	G4
Luminaire front hemisphere is 1 – 2 MH from property line	<u>N/A</u>	G0	G1	G1	G2
Luminaire front hemisphere is 0.5 – 1 MH from property line	<u>N/A</u>	G0	G0	G1	G1
Luminaire back-front hemisphere is less than 0.5 MH from property line	<u>N/A</u>	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *California Administrative Code*.
2. ...
3. ...
4. ...
5. ...

ITEM 7. DSA proposes to adopt new Section 5.107 requiring shade trees at public school and community colleges.

SECTION 5.107 **SHADE TREES**

5.107.1 Shade trees. [DSA-SS] For public schools and community colleges, shade trees shall be installed to comply with Sections 5.107.1.2 and 5.107.1.2. Percentages shown shall be measured at high noon on the spring equinox. Landscape irrigation shall be installed to establish and maintain tree health in accordance with Section 5.304.6.

5.107.1.1 Surface parking areas. Shade trees with a minimum planting size of a #10 container or equal shall be interspersed so that in 15 years 50 percent of the total square footage will be in shade.

Exception: Shade structures included in the design and construction of the surface parking area may be substituted for shade trees to meet the minimum shade calculation requirement.

5.107.1.2 Landscape and hardscape areas. Shade trees with a minimum planting size of a #10 container or equal shall be interspersed so that in 15 years 20 percent of the total square footage will be in shade.

Exception: Areas of sport activity in turf playfields, walks, and covered hardscape areas are not included in the total square footage calculation.

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ITEM 8. DSA proposes to co-adopt the revisions made by the CBSC during the 2016 Intervening Code Cycle for Section 5.303 Water conserving fixtures and fittings.

Division 5.3 – WATER EFFICIENCY AND CONSERVATION

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SECTION 5.303 INDOOR WATER USE

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5.303.3.3.3 Showerheads. [DSA-SS]

5.303.3.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than ~~2.0~~ 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed ~~2.0~~ 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

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ITEM 9. DSA proposes to co-adopt the amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle to Chapter 5, Section 5.407.1.

Division 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

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SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

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5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1403~~2~~.2 (Weather Protection) ~~and California Energy Code Section 150 (Mandatory Features and Devices)~~, manufacturer's installation instructions or local ordinance, whichever is more stringent.

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ITEM 10. DSA proposes to co-adopt the amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle to Chapter 5, Section 5.504.4.4. Division 5.5 – ENVIRONMENTAL QUALITY

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**SECTION 5.504
POLLUTANT CONTROL**

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5.504.4.4 Carpet systems.

All carpet installed in the building interior shall meet at least one of the following testing and product requirements:

1. Carpet ...
2. Compliant ..
3. NSF/ANSI ..
4. Scientific ..
5. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria 2014 Interpretation for EQ 7.0 and EQ 7.1 (formerly EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database.

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ITEM 11. DSA proposes to co-adopt the amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle to Chapter 5, Section 5.504.4.6.

5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, install resilient flooring which meets one of the following:

1. Certified under ..;
2. Compliant with the VOC-emission ..;
3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria 2014 Interpretation for EQ 7.0 and EQ 7.1 (formerly EQ 2.2) dated July 2012 and listed in the CHPS High Performance Product Database;
4. Products ...

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ITEM 12. DSA proposes to co-adopt the amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle to Chapter 5, Section 5.504.5.3.

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5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a

Minimum Efficiency Reporting Value (MERV) of ~~8~~ 13. MERV ~~8~~ 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Exceptions:

1. An ASHRAE 10-percent to 15-percent efficiency filter shall be permitted for an HVAC unit ~~meeting the 2013 California Energy Code~~ having 60,000 Btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm or less at design air flow.
2. Existing mechanical equipment.

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ITEM 13. DSA proposes to co-adopt the amendments proposed by the California Building Standards Commission for the 2018 Triennial Code Cycle to Chapter 5, Section 5.505.1.

**SECTION 5.505
INDOOR MOISTURE CONTROL**

5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of the California Building Code, CCR, Title 24, Part 2, Section 12032(Ventilation) and Chapter 14 (Exterior Walls). For additional measures ~~not applicable to low-rise residential occupancies~~, see Section 5.407.2 of this code.

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ITEM 14. DSA proposes to strike Chapter 8 with the exception of the tables indicated in the matrix adoption table below, as referenced in Section 5.106.8.

**CALIFORNIA GREEN BUILDING STANDARDS CODE – MATRIX
ADOPTION TABLE CHAPTER 8 – COMPLIANCE FORMS,
WORKSHEETS AND REFERENCE MATERIAL**

Adopting agency	BS	BS	SF	HC			DS		OSHDPD				BS	DP	AG	DW	CE	C	SL	SL
	C	C-	M	1	2	1/A	AC	SS	1	2	3	4	CC	H	R	R	C	A	C	C
Adopt entire CA		X						X												
Adopt entire chapter as amended (amended sections listed below)																				

STATE OF CALIFORNIA
DIVISION OF THE STATE ARCHITECT

Adopt only those sections that are listed below								<u>X</u>												
Chapter/Section																				
<u>IES TM-15-11</u>								<u>X</u>												
<u>Table A-1</u>																				
<u>Table 130.2-A</u>								<u>X</u>												
<u>Table 130.2-B</u>								<u>X</u>												

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Notation

Authority: Education Code Sections 17280—17317 and 81130--81147.

References: Education Code Sections 17310 and 81142.